

WHAT IS CLAIMED IS:

1. A semiconductor device comprising:

a crystalline semiconductor film formed on an insulating surface;

an insulating film formed on the crystalline semiconductor film; and

5 a first signal line and a second signal line that partially overlap the crystalline semiconductor film with the insulating film interposed therebetween,

wherein the first signal line and the second signal line are connected to each other through a metal wiring line.

10 2. A device according to claim 1, wherein the first signal line and the second signal line are gate signal lines.

15 3. A device according to claim 1, wherein the first signal line and the second signal line are electrically connected to gate electrodes of thin film transistors in a driving circuit and a pixel region, respectively.

4. A device according to claim 1, wherein the crystalline semiconductor film contains an impurity element giving an n type or a p type conductivity.

20 5. A device according to claim 1, wherein the first signal line and the second signal line are spaced apart from each other so that the first signal line and the crystalline semiconductor film sandwich the insulating film and the second signal line and the crystalline semiconductor film sandwich the insulating film, respectively..

25 6. A device according to claim 5, wherein the first signal line and the second

signal line are gate signal lines.

7. A device according to claim 5, wherein the first signal line and the second signal line are electrically connected to gate electrodes of thin film transistors in a driving circuit and a pixel region, respectively.

8. A device according to claim 5, wherein the crystalline semiconductor film contains an impurity element giving an n type or a p type conductivity.

10 9. A device according to claim 1, wherein said semiconductor device comprises at least one electric device selected from the group consisting of a video camera, a digital camera, a projector, a head mounted display, a car navigation system, a car stereo, a personal computer, a portable information terminal, a mobile computer, a portable telephone and an electronic book.

15 10. A semiconductor device comprising a pixel region and at least one driving circuit portion, comprising:

one or more first protective circuits are provided between the driving circuit and the pixel region, the first protective circuit being connected to each other 20 by a gate signal line,

wherein the first protective circuits protect the pixel region and the driving circuit from static electricity.

25 11. A device according to claim 10, wherein said semiconductor device comprises at least one electric device selected from the group consisting of a video

camera, a digital camera, a projector, a head mounted display, a car navigation system, a car stereo, a personal computer, a portable information terminal, a mobile computer, a portable telephone and an electronic book.

5        12. A semiconductor device comprising a pixel region and at least one driving circuit portion, comprising:

      one or more first protective circuits are provided a second protective circuit and the pixel region, the first protective circuit being connected to a gate signal line,

10        wherein the first protective circuits protect the pixel region and the second protective circuit from static electricity.

15        13. A device according to claim 12, wherein said semiconductor device comprises at least one electric device selected from the group consisting of a video camera, a digital camera, a projector, a head mounted display, a car navigation system, a car stereo, a personal computer, a portable information terminal, a mobile computer, a portable telephone and an electronic book.

20        14. A method of manufacturing a semiconductor device comprising:

      a first step of forming a crystalline semiconductor film on an insulating surface;

      a second step of forming an insulating film on the crystalline semiconductor film;

      a third step of forming a conductive film on the insulating film;

25        a fourth step of patterning the conductive film to form a gate electrode;

a fifth step of forming an interlayer insulating film covering the gate electrode;

a sixth step of forming a contact hole in the interlayer insulating film; and

5 a seventh step of forming a metal wiring line that is electrically connected to a thin film transistor,

wherein the method further comprises the steps of:

forming a second crystalline semiconductor film on an insulating surface in the first step;

10 forming an insulating film on the second crystalline semiconductor film in the second step;

patterning the conductive film in the fourth step to form a first gate signal line and a second gate signal line;

15 forming an interlayer insulating film in the fifth step so as to cover the first gate signal line and the second gate signal line;

forming a contact hole in the interlayer insulating film in the sixth step;

and

20 forming a metal wiring line that electrically connects the first gate signal line with the second gate signal line in the seventh step.

15. A method according to claim 14, wherein said semiconductor device comprises at least one electric device selected from the group consisting of a video camera, a digital camera, a projector, a head mounted display, a car navigation system, a car stereo, a personal computer, a portable information terminal, a mobile computer, 25 a portable telephone and an electronic book.

16. A method of manufacturing a semiconductor device comprising steps of:

forming first and second crystalline semiconductor films on an insulating

surface;

forming an insulating film on the first and second crystalline

5 semiconductor films;

forming a conductive film on the insulating film;

10 patterning the conductive film to form a gate electrode adjacent to the first semiconductor film and form first and second gate signal lines adjacent to the second semiconductor film;

15 forming an interlayer insulating film covering the gate electrode and the first and second gate signal lines;

forming a contact hole in the interlayer insulating film; and

17 forming a metal wiring line that is electrically connected to the first gate signal line with the second gate signal line in the seventh step.

18. A method according to claim 16 wherein the first and second gate signal

lines are arranged apart from each other over the second semiconductor film.

19. A semiconductor device comprising a pre-charge circuit, wherein a first

signal line of the pre-charge circuit is spaced apart from a second signal line of the pre-charge circuit, and

wherein a contact portion is provided at an end of the first signal line of the pre-charge circuit.

5

20. A device according to claim 19, wherein said semiconductor device comprises at least one electric device selected from the group consisting of a video camera, a digital camera, a projector, a head mounted display, a car navigation system, a car stereo, a personal computer, a portable information terminal, a mobile computer.
- 10 a portable telephone and an electronic book.